INT 246 PROJECT

“NEET EXAM QUALIFIER PREDICTOR USING ML”

SUBMITTED BY : -

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INTRODUCTON

WHAT IS NEET EXAM ?

The **National Eligibility cum Entrance Test (Undergraduate)** (or **NEET (UG)**), formerly the All India Pre-Medical Test (AIPMT), is an entrance examination in India for students who wish to study undergraduate medical courses (MBBS) and dental courses (BDS) in government or private medical and dental colleges in India.

The undergraduate NEET (UG), for MBBS and BDS courses, is currently conducted by the National Testing Agency (NTA), which provides the results to the Directorate General of Health Services at the Ministry of Health and Family Welfare.[2] Prior to 2019, the test was conducted by the Central Board of Secondary Education (CBSE) in partnership with Prometric Testing Pvt Ltd headquartered in the US.[3]

NEET-UG replaced the All India Pre Medical Test (AIPMT) and all individual MBBS exams conducted by states or colleges themselves in

2013. However, many colleges and institutes had taken a stay order and conducted private examinations for admission to their MBBS and BDS courses.

NEET-UG is a single entrance test for admissions to more than 66,000 MBBS and BDS seats across India.[4] In 2018, around 80% of the candidates wrote NEET-UG in English, 11% in Hindi, 4.31% in Gujarati, 3% in Bengali and 1.86% in Tamil

PROJECT

I HAVE MADE THIS PROJECT ON MACHINE LEARNING TO PREDICT THE CHANCES OF CRACKING OF THE NEET (National Eligibility cum Entrance Test) EXAM OF A CANDIDATE DEPENDING ON HIS STUDY HOURS, WHETHER HE IS A DAY SCHOLAR OR HOSTELITE OR DROPPER, HOW MUCH HOURS DOES HE STUDIES DAILY ,HOW MANY CHAPTERS HE HAVE COMPLETED.

DEPENDING ON THE AMOUNT OF SYLLABUS OR CHAPTERS COVERED THE PROGRAM GIVES THE OUTPUT IN A MATTER OF TIME OF HIS PROBABILITY OF CRACKING THE EXAM.

IT ALSO ASKS FOR THE USER TO ENTER HIS STUDY MODE,WHETHER HE IS DEPRESSED OR NOT CALCULATES ON THE INPUT DATA HIS OR HER CHANCES OF CRACKING THE EXAMINATION.

IT ALSO HAS A FEATURE OF GETTING THE OUTPUT OF HOW MANY SYLLABUS IS COVERED BY THE CANDIDATE AND HOW MUCH IS LEFT TO COVER BY THE PROGRAM.

I HAVE MADE A DATA SET OF 1000's OF DATA COLLECTED BY ME BY MY OBSERVATION.

THE DATA COLLECTED BY ME ACTS AS A CATALYST IN IMPROVING AND TRAINING MY DATASET.

I HAVE WORKED UPON THIS APPLICATION MAKING IT FULLY FUNCTIONAL USING FLASK TO CREATE A LOCAL SERVER ON MY LAPTOP USING A WEB BASED PAGE ON WHICH ANY USER CAN ENTER HIS OR HER INPUTS REQUIRED FOR THE PREDICTION TO CALCULATE THE PROBABILITY OF CLEARING HIS OR HER NEET EXAM.

I HAVE TWO SEPERATE FOLDERS ONE CONTAINING FLASK CODE AND ANOTHER CONTAINING THE MAIN FILE.

I HAVE MERGED THE MAIN FILE INTO THE FILE CONTAINING THE FLASK FILE WHICH HELPS IN CREATING A LOCAL SERVER ON OUR OWN LAPTOP TO LAUNCH THE ML PREDICTOR.

OBJECTIVE

IT CAN HELP IN ASSESING A STUDENT HIS OR HER PREPARATION ON SPOT WITH 90% ACCURACY IN REAL TIME.

IT HAS AN OPTION OF FINDING THE POSSIBILITY OF CRACKING THE NEET EXAM BY PREDICTION USING ML DEPLOYATION.

IT WILL HELP STUDENTS TO MAKE THEM SERIOUS TOWARDS THEIR STUDIES BY GIVING THEIR REAL TIME PREDICTION AND HELP THEM TO WORK ON THEIR WEAK AREAS TO IMPROVE THEIR SCORE.

IT ALSO HAS A SECTION TO HELP STUDENTS TO FIND OUT HOW MUCH SYLLABUS IS NEEDED TO COVER BEFORE EXAM OR TO FIND OUT HOW MUCH SYLLABUS IS COMPLETED BY HIM OR HER BEFORE THE EXAM

SCOPE OF THE PROJECT

THIS PROJECT NEET EXAM PREDICTOR BASED ON MACHINE LEARNING CAN HELP TO STUDENTS IN MANY WAYS TO BOOST THEIR CONFIDENCE AND TO FIND THEIR WEAKER AREAS TO WORK ON.

THIS PROJECT ON FURTHER IMPROVEMENT ON ITS MACHINE LEARNING LIBRARIES USED CAN WORK BETTER AND FASTER WITH FREATER ACCURACY.

TO IMPROVE ITS UI WE MAY WORK A LITTLE ON FLASK TO MAKE IT A USER FRIENDLY UI.

THIS PROJECT SOURCE CODE CAN BE DEPLOYED ON HEROKU TO MAKE IT AVAILABLE ONLINE SO THAT ITS REACH CAN BE INCREASED.

LIMITATIONS

IT HAS SOME LIMITATIONS ON ITS INPUTS LIKE A USER CANNOT ENTER TIME IN HOURS FORMAT MORE THAN 24 HOURS, AND THE THE NUMBER OF TOTAL CHAPTERS CANNOT BE LESS THAN THE NUMBER OF CHAPTERS COMPLETED.

IF A USER TRIES TO ENTER THE INPUT BEYOND THIS RANGE IT WILL GIVE USER A WARNING MESSAGE TO ENTER THE DETAILS IN THE REQUIRED RANGE.

CODE

PYTHON (MAIN FILE)

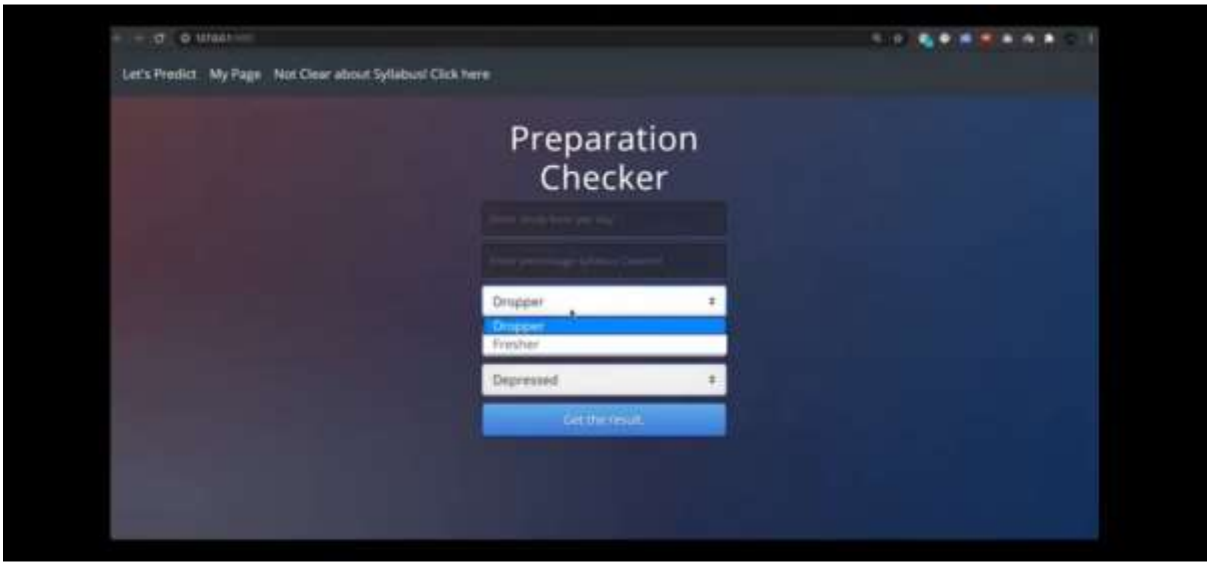
```
1.  import pandas as pd   #loaing dataset

2.  import numpy as np   #mathematical calculation
    import pickle       #saving the model

3.  data=pd.read_csv("datajee.csv")  #to load file
4.  data.head()     #top five rows
5.  data.describe()    #8 mathematical
6.  data.info()     #data type of columns + Not null value
7.  data.isnull().sum()    #tels about missing value
8.  correlation=data.corr()          #Not correlated
    correlation
9.  from sklearn.model_selection import train_test_split     #split the data into train and test
10. from sklearn.linear_model import LogisticRegression          #classification
11. from sklearn.metrics import accuracy_score,confusion_matrix        #accuracy
12. data=data.drop(columns='Name')     #to drop name column
13. new_data=pd.get_dummies(data)        #particular column has many sub type then split iand
    use 0 &1 so we can use Logistic regression easily
    new_data
14. column_list=new_data.columns
    column_list
15. x=new_data.drop(['Probablity'],axis=1).values
    x
16. y=new_data['Probablity'].values               #storing output variabe in y
    print(y)
17. train_x,test_x,train_y,test_y=train_test_split(x,y,test_size=0.4,random_state=0)
18. logistic=LogisticRegression()   #model
19. test_x
20. test_y
21. test_x
22. logistic.fit(train_x,train_y)  #fit training data
23. prediction=logistic.predict(test_x)       #prediction from the test data
    prediction
24. confusion_matrix=confusion_matrix(test_y, prediction)     #confusion matrix
    confusion_matrix
25. accuracy_score=accuracy_score(test_y, prediction)       #calculating the accuracy
    print(accuracy_score)                             #This is the accuracy it can be mor accurate if we
    romove some more
26. print("No of misclassified value :",(test_y!=prediction).sum())
27. with open("neet.pkl","wb") as file:
28.     pickle.dump(logistic,file)
```

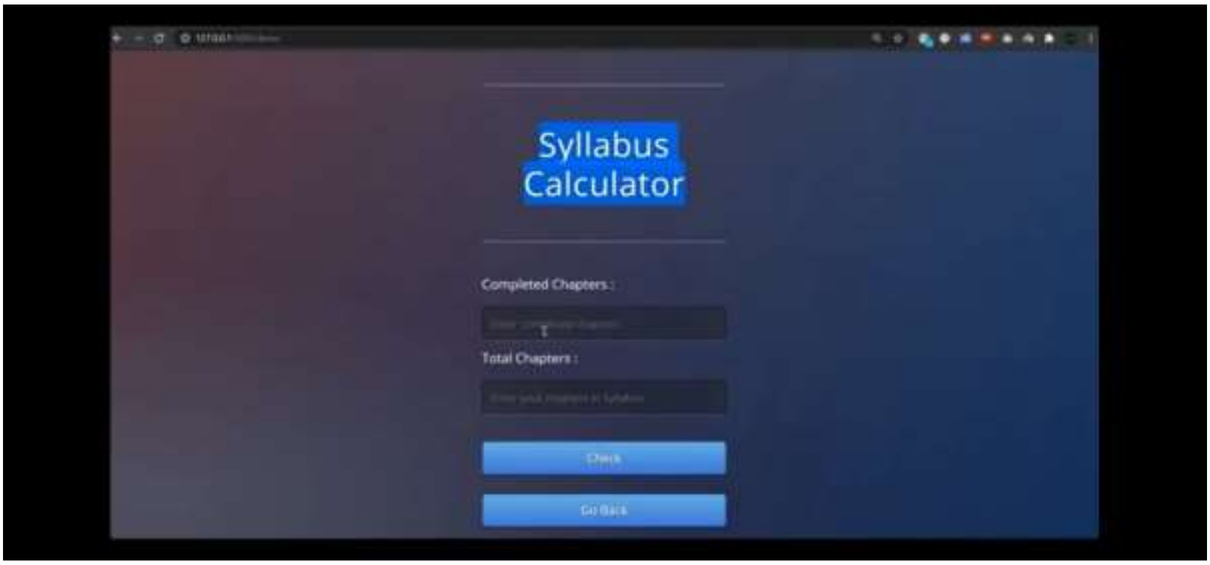
29. X
30. prediction=logistic.predict_proba([[23, 0, 70, 0, 0]])   #prediction from the test data
    prediction

flask code

```
from flask import Flask,render_template,request
import pickle
with open("neet.pkl","rb") as file:
   logistic=pickle.load(file)
app = Flask(__name__)
@app.route("/demo")
def demo():
   return render_template('demo.html')
@app.route("/next")
def lamo():
   return render_template('next.html')
@app.route("/hello",methods=["GET","POST"])
def Back():
   if request.method=="POST":
      mydict=request.form
      user1=int(mydict['user1'])
      user2=int(mydict['user2'])
      user3=int(mydict['user3'])
      user4=int(mydict['user4'])
      user5=int(mydict['user5'])
```

```
        myvar=[user1,user4,user2,user3,user5]
        print([myvar])
        prob=logistic.predict_proba([myvar])[0][1]
        prob=prob*100
        if(user1<24 and user2<100):
            return render_template('next.html',inf=round(prob,2))
        else:
            return render_template('hello.html')

    else:
        return render_template('hello.html')



@app.route("/",methods=["GET","POST"])
def login():
    if request.method=="POST":
        mydict=request.form
        user1=int(mydict['user1'])
        user2=int(mydict['user2'])
        user3=int(mydict['user3'])
        user4=int(mydict['user4'])
        user5=int(mydict['user5'])
        myvar=[user1,user4,user2,user3,user5]
        print([myvar])
        prob=logistic.predict_proba([myvar])[0][1]
        prob=prob*100
        if(user1<24 and user2<100):

            return render_template('next.html',inf=round(prob,2))

        else:

            return render_template('hello.html')

    else:

        return render_template('next.html')



if __name__ == "__main__":


    app.run(debug=True)
```

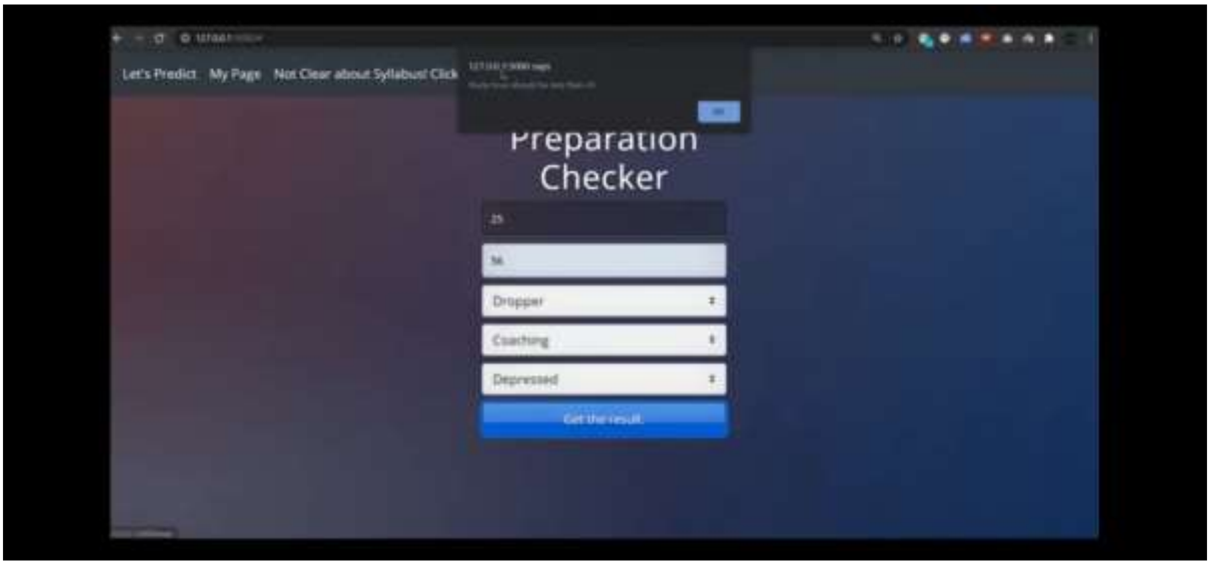




Syllabus Calculator

Completed Chapters :

Total Chapters :



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Preparation Checker

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Dropper

Coaching

Depressed